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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,914	12/09/2003	Kazumi Naito	Q78484	3295

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EXAMINER

MAI, NGOCLAN THI

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,914

Applicant(s)

NAITO ET AL.

Examiner

Ngoclan T. Mai

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14-24, 28-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Shekhter et al.

Shekhter et al. disclosed niobium powder containing less 200 ppm Ta, see Table 10.1. The niobium powder also contains 8,000 ppm nitrogen obtained by nitriding using 2.0 W/W% NH₄Cl during deoxidation. see also table 10.1.

Shekhter et al taught that the powder being used in either primary or secondary form, i.e. as agglomerated aggregates (agglomerates), which is equivalent to applicant granules to form capacitor anode, col. 4, lines 47-61 and the sintering is done in vacuum, which is a reduced pressure at 1200 C for 20 minutes, col. 7, lines 13-14. Shekhter et al also taught the agglomeration can be thermal and/or physical agglomeration accomplished by a variety of well known method, which reads on the limitation of claims 30-32.

Shekhter et al disclosed the limitation of claims 20-22 by teaching that niobium powder produced by magnesium gas reduction has a base grain size of about 400 nm and many smaller grains of about 20 nm thereon many of which smaller grains are themselves agglomerates of up to 100 nm in size, see col. 9, lines 27-34.

With regarding claims 23-24 Shekhter et al disclosed these limitations in col. 11, lines 6-27.

With regarding claims 28-29 Shekhter et al disclosed these limitations in col. 4, lines 54-61

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shekhter et al in view of EP 0953847.

Shekhter et al disclosed the claimed capacitor substantially as claimed. The only difference between the claims and Shekhter et al is that Shekhter et al did not teach the other electrode formed by the claimed material.

EP 0953847 disclosed capacitor comprising a pair of electrodes and a dielectric substance between the two electrodes, one of the electrodes is composed of sintered niobium nitride and the other electrode is composed of an ingredient selected from

Art Unit: 1742

electrolytes, organic semiconductors and inorganic semiconductors. See abstract. EP 0953847 also disclosed by the limitation of claim 26-27 on page 4, lines 1-49.

Since the capacitor taught by Shekhter et al also employed nitrided niobium powder form an anode (i.e. one of the electrodes), it would have been obvious to one of ordinary skill in the art at the time the invention was made to form capacitor taught by Shekhter et al by employing other electrode taught by EP0953847.

Since the secondary reference disclosed the claimed *electrode* is conventionally known in the same field of endeavor for making capacitor. Therefore, combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill artisan. In re Castner, 186 USPQ 2 13 (217). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 14-19, 23-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3, 4 of U.S. Patent No. 6,540,810.

The sintered body of claims 14-16 read on the sintered body of claim 3 of the patent with claim 1 and/or claim 2 incorporated therein.

The method of claims 17-19 is obvious over the method of claim 4 of the patent with claim 1 and/or claim 2 incorporated therein.

The capacitor of claims 23-27 is obvious over the capacitor of claims 5-9 of the patent.


The electronic circuit and electronic equipment claimed in claim 28-29 are obvious over claims 10 and 11 of the patent, respectively.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (703) 306-4162. The examiner can normally be reached on 7:30-4:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1742

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Ngoclan T. Mai
Primary Examiner
Art Unit 1742

n.m.
October 1, 2004